

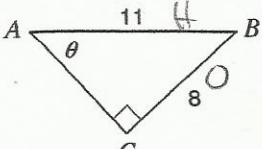
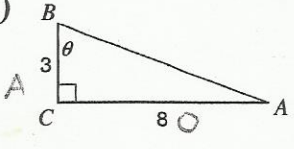
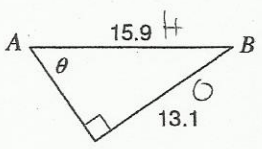
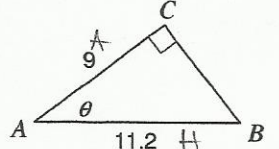
I. Find the value of angle θ . Round to the nearest degree.

- 1.) $\cos \theta = 0.1736 \rightarrow \underline{80^\circ}$ $\theta = \cos^{-1}(0.1736)$
 2.) $\sin \theta = 0.9511 \rightarrow \underline{72^\circ}$ $\theta = \sin^{-1}(0.9511)$
 3.) $\tan \theta = 0.6249 \rightarrow \underline{32^\circ}$ $\theta = \tan^{-1}(0.6249)$

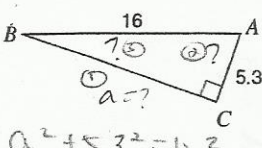
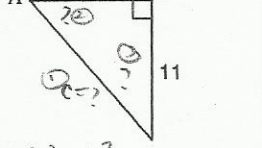
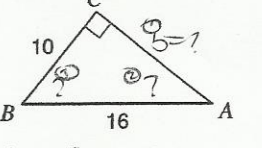
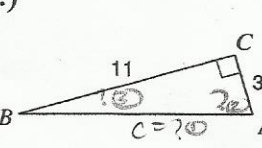
II. Evaluate the following using the definitions of the inverse trig ratios.

- 4.) $\cos(\arccos \frac{2}{3}) \rightarrow \underline{\frac{2}{3}}$
 5.) $\sin(\tan^{-1} 0) \rightarrow \underline{0}$
 6.) $\tan(\arcsin 1) \rightarrow \underline{\phi}$
 7.) $\sin(\sin^{-1} \frac{4}{12}) \rightarrow \underline{\frac{1}{3}}$
 8.) $\cos(\arcsin \frac{\sqrt{3}}{2}) \rightarrow \underline{\frac{1}{2}}$
 9.) $\tan(\cos^{-1} \frac{\sqrt{2}}{2}) \rightarrow \underline{1}$

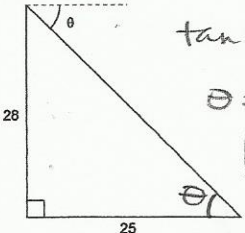
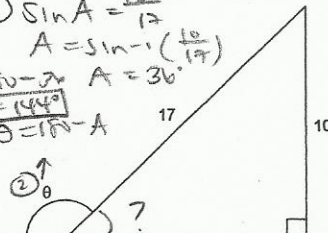
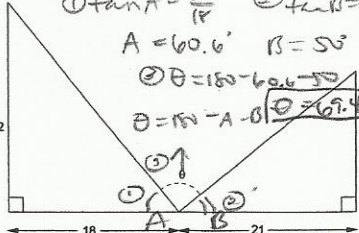
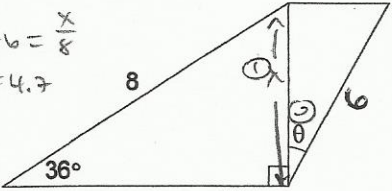
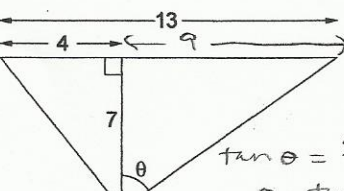
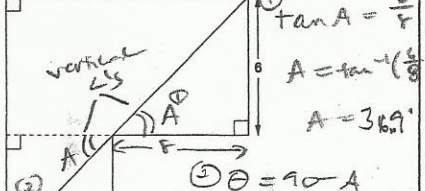
III. Find the measure of angle θ (use the appropriate letter). Round to nearest tenth. Show work!

<p>10.) </p> <p>$\sin A = \frac{8}{11}$ $A = \sin^{-1}(\frac{8}{11})$ $A = 46.7^\circ$</p>	<p>11.) </p> <p>$\tan B = \frac{8}{3}$ $B = \tan^{-1}(\frac{8}{3})$ $B = 69.4^\circ$</p>	<p>12.) </p> <p>$\sin A = \frac{13.1}{15.9}$ $A = \sin^{-1}(\frac{13.1}{15.9})$ $A = 55.5^\circ$</p>	<p>13.) </p> <p>$\cos A = \frac{9}{11.2}$ $A = \cos^{-1}(\frac{9}{11.2})$ $A = 36.5^\circ$</p>
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IV. Solve each triangle. Round all answers to nearest tenth. Show all of your work!!

<p>14.) </p> <p>① $a^2 + 5.3^2 = 16^2$ $a = 15.1$ ② $\cos A = \frac{5.3}{16}$ $A = 70.7^\circ$ ③ $B = 90 - 70.7$ $B = 19.3^\circ$</p>	<p>15.) </p> <p>① $11^2 + 9.7^2 = c^2$ $c = 14.7$ ② $\tan A = \frac{11}{9.7}$ $A = 48.6^\circ$ ③ $B = 90 - 48.6$ $B = 41.4^\circ$</p>	<p>16.) </p> <p>① $10^2 + 16^2 = c^2$ $c = 18.8$ ② $\sin A = \frac{10}{18.8}$ $A = 32.7^\circ$ ③ $B = 90 - 32.7$ $B = 57.3^\circ$</p>	<p>17.) </p> <p>① $11^2 + 3^2 = c^2$ $c = 11.4$ ② $\tan A = \frac{3}{11}$ $A = 15.3^\circ$ ③ $B = 90 - 15.3$ $B = 74.7^\circ$</p>
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V. Find the measure of angle θ . Round to tenth place. Must show work!

<p>18.) </p> <p>$\tan \theta = \frac{28}{25}$ $\theta = \tan^{-1}(\frac{28}{25})$ $\theta = 48.2^\circ$</p>	<p>19.) </p> <p>① $\sin A = \frac{10}{17}$ $A = \sin^{-1}(\frac{10}{17})$ $A = 36.1^\circ$ ② $\theta = 180 - 2A$ $\theta = 180 - 72.2$ $\theta = 107.8^\circ$</p>	<p>20.) </p> <p>① $\tan A = \frac{32}{18}$ $A = 60.6^\circ$ ② $\tan B = \frac{18}{21}$ $B = 40.9^\circ$ ③ $\theta = 180 - A - B$ $\theta = 180 - 60.6 - 40.9$ $\theta = 78.5^\circ$</p>
<p>21.) </p> <p>① $\sin 36 = \frac{x}{8}$ $x = 4.7$ ② $\cos \theta = \frac{4.7}{6}$ $\theta = 38.4^\circ$</p>	<p>22.) </p> <p>$\tan \theta = \frac{7}{9}$ $\theta = \tan^{-1}(\frac{7}{9})$ $\theta = 37.9^\circ$</p>	<p>23.) </p> <p>① $\tan A = \frac{17}{9}$ $A = \tan^{-1}(\frac{17}{9})$ $A = 61.9^\circ$ ② $\theta = 90 - A$ $\theta = 90 - 61.9$ $\theta = 28.1^\circ$</p>